

A PHARMACEUTICAL COMPOSITION OF COMPLEX CARBOHYDRATES

AND ESSENTIAL OILS AND METHODS OF USING THE SAME

THIS APPLICATION CLAIMS DOMESTIC PRIORITY UNDER 35 U.S.C. §120 OF APPLICATION NO. 08/241,692 FILED ON MAY 12, 1994.

BACKGROUND AND FIELD OF THE INVENTION

Complex carbohydrates, for purposes of this invention are defined as any polymer comprising more than two sugar moieties and would thus include such classes of compounds as polysaccharides and oligosaccharides. Polysaccharides include glycosaminoglycans and mannans whereas oligosaccharides are comprised of branched polysaccharides such as sialylated sugars including milk sugars.

Glycosaminoglycans are mucopolysaccharides which can be obtained from numerous sources (e.g. rooster combs, trachea, umbilical cords, skin, articular fluids and certain bacteria such as Streptococci spp). Most glycosaminoglycans (hyaluronic acid, chondroitin sulfates A, B, and C, heparin sulfate, heparin, keratan sulfate, dermatan sulfate, etc.) are composed of repeating sugars such as non-sulfated n-acetylglucosamine, glucuronic acid and n-acetyl galactosamine (these are known as non-sulfated glycosaminoglycans) or polysulfated sugars (sulfated glycosaminoglycans).

Mannans are mannose-based polysaccharides which are normally extracted from plants. The most noteworthy is acemannan which is a beta 1,4-linked acetylated mannan extracted from the Aloe Vera plant (Aloe barbadensis Miller). This plant has been thought for centuries to have certain healing powers. Not until the 1980s